



**OPERATOR'S MANUAL
MANUEL de L'UTILISATEUR
MANUAL del OPERADOR**



**Cat. No.
No de cat.**

9070-20	9075-20
9071-20	9092-20
9072-20	9096-20
9072-22	

**IMPACT WRENCH
CLÉ À PERCUSSION
LLAVE DE IMPACTO**

**TO REDUCE THE RISK OF INJURY, USER MUST READ OPERATOR'S MANUAL.
AFIN DE RÉDUIRE LE RISQUE DE BLESSURES, L'UTILISATEUR DOIT LIRE LE MANUEL DE L'UTILISATEUR.
PARA REDUCIR EL RIESGO DE LESIONES, EL USUARIO DEBE LEER EL MANUAL DEL OPERADOR.**

GENERAL SAFETY RULES — FOR ALL POWER TOOLS



WARNING

READ ALL INSTRUCTIONS

Failure to follow all instructions listed below may result in electric shock, fire and/or serious injury. The term "power tool" in all of the warnings listed below refers to your mains-operated (corded) power tool or battery-operated (cordless) power tool.

SAVE THESE INSTRUCTIONS

WORK AREA SAFETY

1. **Keep work area clean and well lit.** Cluttered or dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

ELECTRICAL SAFETY

4. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use any adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce risk of electric shock.
5. **Avoid body contact with earthed or grounded surfaces such as pipes, radiators, ranges and refrigerators.** There is an increased risk of electric shock if your body is earthed or grounded.
6. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
7. **Do not abuse the cord. Never use the cord for carrying, pulling, or unplugging the power tool. Keep cord away from heat, oil, sharp edges, or moving parts.** Damaged or entangled cords increase the risk of electric shock.
8. **When operating a power tool outdoors, use an extension cord suitable for outdoor use.** Use of a cord suitable for outdoor use reduces the risk of electric shock.

PERSONAL SAFETY

9. **Stay alert, watch what you are doing and use common sense when operating a power tool. Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication.** A moment of inattention while operating power tools may result in serious personal injury.
10. **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
11. **Avoid accidental starting. Ensure the switch is in the off-position before plugging in.** Carrying tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.
12. **Remove any adjusting key or wrench before turning the power tool on.** A wrench or a key left attached to a rotating part of the power tool may result in personal injury.
13. **Do not overreach. Keep proper footing and balance at all times.** This enables better control of the power tool in unexpected situations.
14. **Dress properly. Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts.** Loose clothes, jewellery, or long hair can be caught in moving parts.
15. **If devices are provided for the connection of dust extraction and collection facilities, ensure these are connected and properly used.** Use of these devices can reduce dust-related hazards.

POWER TOOL USE AND CARE

16. **Do not force the power tool. Use the correct power tool for your application.** The correct power tool will do the job better and safer at the rate for which it was designed.
17. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
18. **Disconnect the plug from the power source and/or the battery pack from the power tool before making any adjustments, changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the tool accidentally.
19. **Store idle power tools out of the reach of children and do not allow persons unfamiliar with the power tools or these instructions to operate power tools.** Power tools are dangerous in the hands of untrained users.
20. **Maintain power tools. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use.** Many accidents are caused by poorly maintained power tools.
21. **Keep cutting tools sharp and clean.** Properly maintained cutting tools with sharp cutting edges are less likely to bind and are easier to control.
22. **Use the power tool, accessories and tool bits etc., in accordance with these instructions and in the manner intended for the particular type of power tool, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from those intended could result in a hazardous situation.

SERVICE

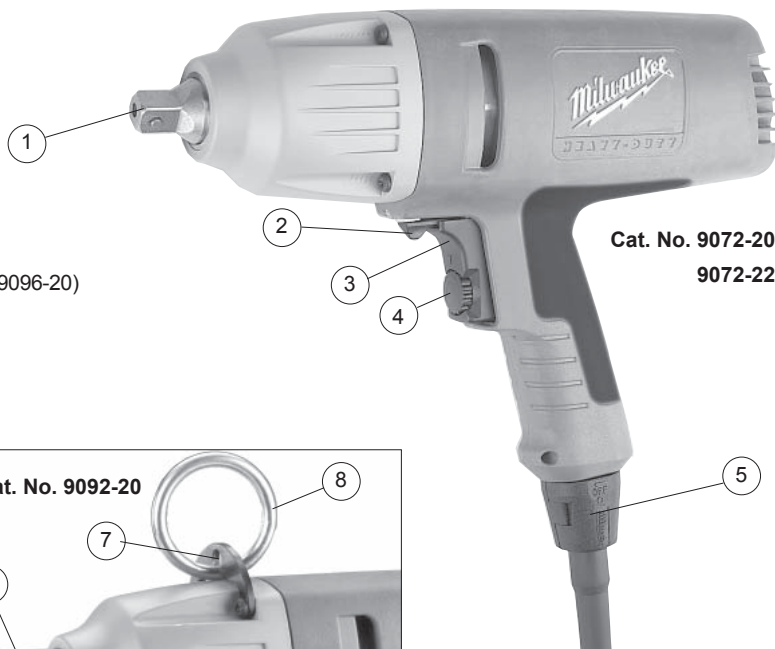
23. **Have your power tool serviced by a qualified repair person using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

SPECIFIC SAFETY RULES

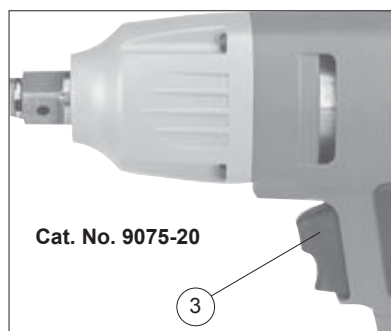
1. **Hold power tools by insulated gripping surfaces when performing an operation where the cutting tool may contact hidden wiring or its own cord.** Contact with a "live" wire will make exposed metal parts of the tool "live" and shock the operator.
2. **Maintain labels and nameplates.** These carry important information. If unreadable or missing, contact a MILWAUKEE service facility for a free replacement.
3. **WARNING!** Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - lead from lead-based paint
 - crystalline silica from bricks and cement and other masonry products, and
 - arsenic and chromium from chemically-treated lumber.Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

FUNCTIONAL DESCRIPTION

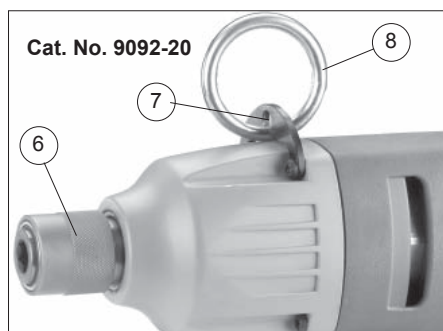
1. Drive shank
2. Forward/reverse switch
(Cat. No. 9072-20, 9072-22, 9092-20, 9096-20)
3. Trigger
(Cat. No. 9072-20, 9072-22, 9092-20, 9096-20)
Rocker switch (Cat. No. 9070-20, 9071-20, 9075-20)
4. Speed control dial
(Cat. No. 9072-20, 9072-22, 9092-20, 9096-20)
5. Quik-Lok® cord (Cat. No. 9072-20, 9072-22, 9092-20, 9096-20)
6. Quick change chuck (Cat. No. 9092-20, 9096-20)
7. Tool hanger (Cat. No. 9092-20, 9096-20)
8. Tool hanger ring (Cat. No. 9092-20, 9096-20)



**Cat. No. 9072-20
9072-22**



Cat. No. 9075-20



Cat. No. 9092-20

Symbology

	Double Insulated
	Volts Alternating Current/ Direct Current
	Volts Alternating Current
	Amperes
	Impacts per Minute Under Load (IPM)
	Underwriters Laboratories, Inc.
	Canadian Standards Association
	Mexican Approvals Marking

Specifications

Cat. No.	Volts	A	No Load RPM	Drive Shank	Impacts Per Minute	Average Torque Output
9070-20	120 AC/DC	7	1800	1/2"	2600	300 ft.-lbs.
9071-20	120 AC/DC	7	1800	1/2"	2600	300 ft.-lbs.
9072-20	120 AC Only	7	600-1800	1/2"	1000-2600	100-300 ft.-lbs.
9072-22	120 AC Only	7	600-1800	1/2"	1000-2600	100-300 ft.-lbs.
9075-20	120 AC/DC	7	1750	3/4"	2500	380 ft.-lbs.
9092-20	120 AC Only	7	600-1800	7/16" Hex	1000-2600	100-315 ft.-lbs.
9096-20	120 AC Only	7	600-1800	5/8" Hex	1000-2600	100-315 ft.-lbs.

Quick Change Chuck Capacities*

Cat. No.	Quick Change Auger Bits	Selffeed Bits
9070-20	1-1/2"	2-9/16"
9072-20	1-1/2"	2-9/16"
9072-22	1-1/2"	2-9/16"
9092-20	1-1/2"	2-9/16"
9096-20	1-1/2"	2-9/16"

* Only for use with the 7/16" or 5/8" Hex Quick Change chuck, standard equipment on the 9092-20 (7/16") and 9096-20 (5/8"), optional accessory (Cat. No. 48-66-0061) on other models.

GROUNDING



WARNING

Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the cord or plug is damaged. If damaged, have it repaired by a **MILWAUKEE** service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

Grounded Tools:

Tools with Three Prong Plugs

Tools marked "Grounding Required" have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet (See Figure A). If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock.

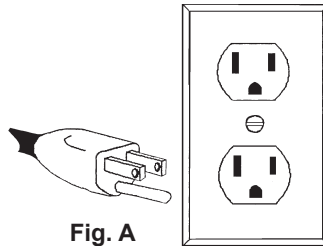


Fig. A

The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool's grounding system and must never be attached to an electrically "live" terminal.

Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in Figure A.

Double Insulated Tools:

Tools with Two Prong Plugs

Tools marked "Double Insulated" do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association and the National Electrical Code. Double Insulated tools may be used in either of the 120 volt outlets shown in Figures B and C.

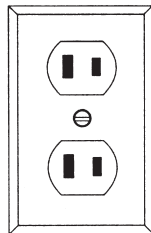


Fig. B

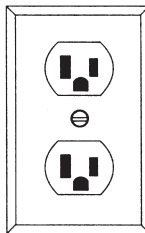


Fig. C

EXTENSION CORDS

Grounded tools require a three wire extension cord. Double insulated tools can use either a two or three wire extension cord. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. Refer to the table shown to determine the required minimum wire size.

The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. When using more than one extension cord to make up the total length, be sure each cord contains at least the minimum wire size required. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum wire size.

Guidelines for Using Extension Cords

- If you are using an extension cord outdoors, be sure it is marked with the suffix "W-A" ("W" in Canada) to indicate that it is acceptable for outdoor use.
- Be sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified person before using it.
- Protect your extension cords from sharp objects, excessive heat and damp or wet areas.

Recommended Minimum Wire Gauge for Extension Cords*

Nameplate Amperes	Extension Cord Length					
	25'	50'	75'	100'	150'	200'
0 - 5	16	16	16	14	12	12
5.1 - 8	16	16	14	12	10	--
8.1 - 12	14	14	12	10	--	--
12.1 - 15	12	12	10	10	--	--
15.1 - 20	10	10	10	--	--	--

* Based on limiting the line voltage drop to five volts at 150% of the rated amperes.

READ AND SAVE ALL INSTRUCTIONS FOR FUTURE USE.

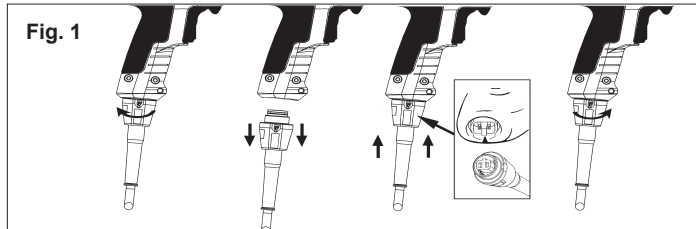


WARNING

To reduce the risk of injury, always unplug tool before attaching or removing accessories or making adjustments. Use only specifically recommended accessories. Others may be hazardous.

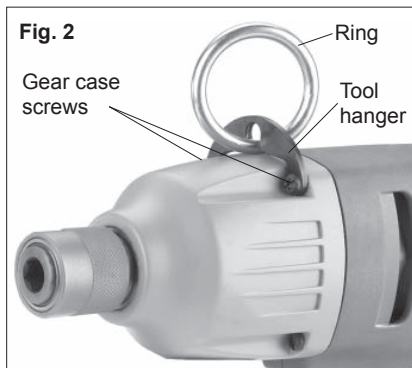
Removing and Replacing Quik-Lok® Cords (Fig. 1) Cat. No. 9072-20, 9072-22, 9092-20 and 9096-20

MILWAUKEE's exclusive Quik-Lok® Cords provide instant field replacement or substitution.



1. To remove the Quik-Lok® Cord, turn the cord nut 1/4 turn to the left and pull it out.
2. To replace the Quik-Lok® Cord, align the connector keyways and push the connector in as far as it will go. Turn the cord nut 1/4 turn to the right to lock.

Attaching and Removing the Tool Hanger (Fig. 2) Cat. No. 9092-20, 9096-20, or as an accessory



1. To **attach**, remove the two top gear case screws (Fig. 2).
2. Place the ring through the tool hanger.
3. Position the tool hanger on the tool over the two gear case screw holes.
4. Replace the two gear case screws. Hand tighten the screws.
5. To **remove**, reverse the procedure.



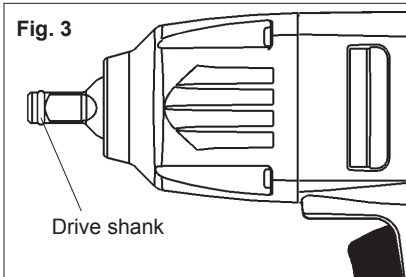
WARNING

Use only sockets and other accessories specifically designed for use on impact wrenches and drivers. Other sockets and accessories might shatter or break causing injury.

Attaching and Removing Accessories (Fig. 3) Cat. No. 9071-20, 9075-20

This impact wrench is intended only for use with sockets designed for impact wrenches and that have a 1/2" square drive (3/4" square drive for Cat. No. 9075-20). Other sockets could shatter or break, causing injury.

Fig. 3

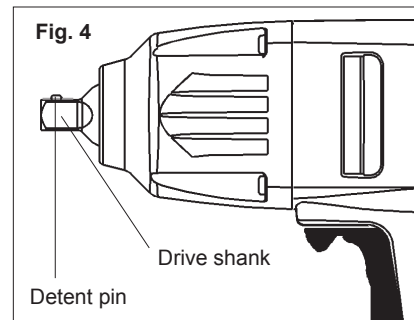


1. To attach a socket or other accessory, push the accessory onto the drive shank until it snaps into place.
2. To remove the accessory, pull it off the drive shank.

Attaching and Removing Accessories (Fig. 4) Cat. No. 9070-20, 9072-20, 9072-22

These impact wrenches are intended only for use with sockets designed for impact wrenches and that have a 1/2" square drive. Other sockets could shatter or break, causing injury.

Fig. 4

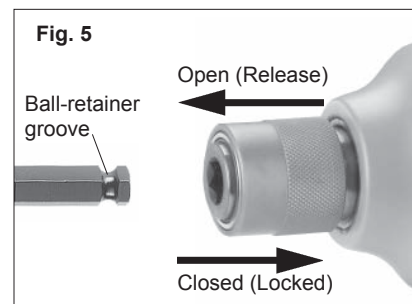


1. To attach a socket or other accessory, align the hole in the accessory with the detent pin on the drive shank. Hold the detent pin in while pushing the socket onto the drive shank. The detent pin will snap into place in the hole to secure the socket.
2. To remove the accessory, insert a nail or other thin object into the hole in the accessory and press the detent pin in. Pull the accessory off the drive shank.

Attaching and Removing Accessories (Fig. 5) Cat. No. 9092-20, 9096-20, or other Impact Wrenches using the Quick Change 1/2" Square Drive to 7/16" Hex Adapter

Cat. No. 9092-20 and accessory Cat. No. 48-66-0061 are intended for use with drill bits and adapters with a 7/16" Hex Quick Change shank. Cat. No. 9096-20 is intended for use with drill bits and adapters with a 5/8" Hex Quick Change shank. Both Hex Quick Change shanks have a ball-retainer groove. They are not intended for use with Hex Shank Bit Extensions.

Fig. 5



1. To attach an accessory, pull the chuck collar forward and insert the accessory shank. Release the collar. It may be necessary to pull the bit out slightly to engage the holding mechanism.
2. To remove the accessory, pull the chuck collar forward and remove the accessory. Release the collar.

OPERATION

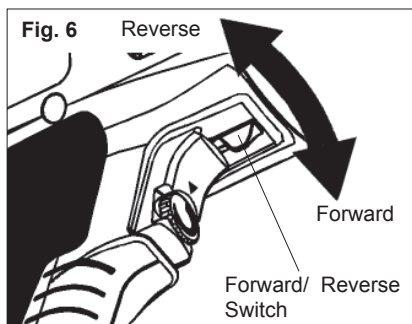


WARNING

To reduce the risk of injury, wear safety goggles or glasses with side shields. Unplug the tool before changing accessories or making adjustments.

Using the Forward/Reverse Switch (Fig. 6) Cat. No. 9072-20, 9072-22, 9092-20, and 9096-20

This impact wrench is equipped with a forward/reverse switch that may be set to forward or reverse rotation.



1. For **forward** (clockwise) rotation, push the forward/reverse switch in the direction shown. Check the direction of rotation before use.
2. For **reverse** (counterclockwise) rotation, push the forward/reverse switch in the direction shown. Check the direction of rotation before use.



WARNING

To reduce the risk of injury, keep hands and cord away from the bit and all moving parts.



WARNING

To reduce the risk of explosion, electric shock and property damage, always check the work area for hidden pipes and wires before drilling.

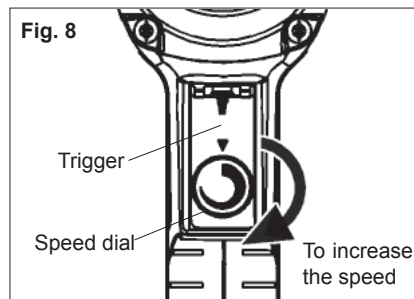


WARNING

To reduce the risk of injury, only grasp tool by handle and red insulated surfaces (Fig. 7). Do not hold gray gear case when impacting or drilling.



Starting, Stopping and Controlling Speed (Fig. 8) Cat. No. 9072-20, 9072-22, 9092-20, and 9096-20

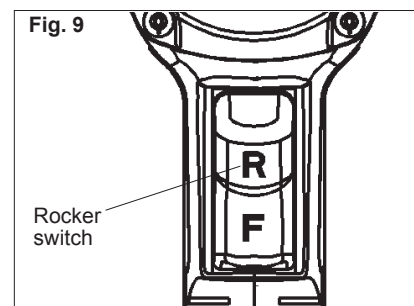


This impact wrench may be operated at any speed from 0 to full speed. The speed will remain variable up to the chosen speed dial setting by use of the trigger. The speed dial turns clockwise to increase the speed or counterclockwise to decrease the speed (Fig. 8).

1. Select a speed on the speed dial.
2. To **start** the tool, pull the trigger.
3. To vary the driving speed, increase or decrease pressure on the trigger. The further the trigger is pulled, the greater the speed.
4. To **stop** the tool, release the trigger.

Starting and Stopping the Tool (Fig. 9) Cat No. 9070-20, 9071-20, 9075-20

These impact wrenches are equipped with a rocker switch that offers both forward and reverse rotation.



1. For **forward** (clockwise) rotation, pull the lower portion of the switch.
2. For **reverse** (counterclockwise) rotation, pull the upper portion of the switch.

NOTE: To prevent damage to the motor and internal mechanism, allow the motor to stop completely before switching from forward to reverse or from reverse to forward.

Impacting Techniques

The longer a bolt, screw, or nut is impacted, the tighter it will become. To help prevent damaging the fasteners or workpieces, avoid excessive impacting. Be particularly careful when impacting smaller fasteners because they require less impacting to reach optimum torque.

Practice with various fasteners, noting the length of time required to reach the desired torque. Check the tightness with a hand-torque wrench. If the fasteners are too tight, reduce the impacting time. If they are not tight enough, increase the impacting time.

Impacting for two seconds is generally sufficient for a 3/8" bolt and one second for a 5/16" bolt. However, oil, dirt, rust or other matter on the threads or under the head of the fastener affects the degree of tightness.

The torque required to loosen a fastener averages 75% to 80% of the tightening torque, depending on the condition of the contacting surfaces. However, if rust or corrosion causes seizing, more torque may be required.

On light gasket jobs, run each fastener down to a relatively light torque and use a hand torque wrench for final tightening.

MAINTENANCE



WARNING

To reduce the risk of injury, always unplug your tool before performing any maintenance. Never disassemble the tool or try to do any rewiring on the tool's electrical system. Contact a **MILWAUKEE** service facility for ALL repairs.

Maintaining Tools

Keep your tool in good repair by adopting a regular maintenance program. Before use, examine the general condition of your tool. Inspect guards, switches, tool cord set and extension cord for damage. Check for loose screws, misalignment, binding of moving parts, improper mounting, broken parts and any other condition that may affect its safe operation. If abnormal noise or vibration occurs, turn the tool off immediately and have the problem corrected before further use. Do not use a damaged tool. Tag damaged tools "DO NOT USE" until repaired (see "Repairs").

Under normal conditions, relubrication is not necessary until the motor brushes need to be replaced. After six months to one year, depending on use, return your tool to the nearest **MILWAUKEE** service facility for the following:

- Lubrication
- Brush inspection and replacement
- Mechanical inspection and cleaning (gears, spindles, bearings, housing, etc.)
- Electrical inspection (switch, cord, armature, etc.)
- Testing to assure proper mechanical and electrical operation



WARNING

To reduce the risk of injury, electric shock and damage to the tool, never immerse your tool in liquid or allow a liquid to flow inside the tool.

Cleaning

Clean dust and debris from vents. Keep the tool handles clean, dry and free of oil or grease. Use only mild soap and a damp cloth to clean your tool since certain cleaning agents and solvents are harmful to plastics and other insulated parts. Some of these include: gasoline, turpentine, lacquer thinner, paint thinner, chlorinated cleaning solvents, ammonia and household detergents containing ammonia. Never use flammable or combustible solvents around tools.

Repairs

If your tool is damaged, return the entire tool to the nearest service center.

ACCESSORIES



WARNING

To reduce the risk of injury, always unplug the tool before attaching or removing accessories. Use only specifically recommended accessories. Others may be hazardous.

For a complete listing of accessories refer to your **MILWAUKEE** Electric Tool catalog or go on-line to www.milwaukeetool.com. To obtain a catalog, contact your local distributor or a service center.

FIVE YEAR TOOL LIMITED WARRANTY

Every **MILWAUKEE** tool is tested before leaving the factory and is warranted to be free from defects in material and workmanship. **MILWAUKEE** will repair or replace (at **MILWAUKEE**'s discretion), without charge, any tool (including battery chargers) which examination proves to be defective in material or workmanship from five (5) years after the date of purchase. Return the tool and a copy of the purchase receipt or other proof of purchase to a **MILWAUKEE** Factory Service/Sales Support Branch location or **MILWAUKEE** Authorized Service Station, freight prepaid and insured. This warranty does not cover damage from repairs made or attempted by other than **MILWAUKEE** authorized personnel, abuse, normal wear and tear, lack of maintenance, or accidents.

The warranty period for V28 Battery Packs is two (2) years from the date of purchase. The warranty period for Ni-Cd battery Packs, Flashlights, Radios are warranted for one (1) year from the date of purchase.

THE REPAIR AND REPLACEMENT REMEDIES DESCRIBED HEREIN ARE EXCLUSIVE. IN NO EVENT SHALL **MILWAUKEE** BE LIABLE FOR ANY INCIDENTAL, SPECIAL, OR CONSEQUENTIAL DAMAGES, INCLUDING LOSS OF PROFITS.

THIS WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, OR CONDITIONS, WRITTEN OR ORAL, EXPRESSED OR IMPLIED FOR MERCHANTABILITY OR FITNESS FOR PARTICULAR USE OR PURPOSE.

This warranty gives you specific legal rights. You may also have other rights that vary from state to state and province to province. In those states that do not allow the exclusion of implied warranties or limitation of incidental or consequential damages, the above limitations or exclusions may not apply to you. This warranty applies to the United States, Canada, and Mexico only.